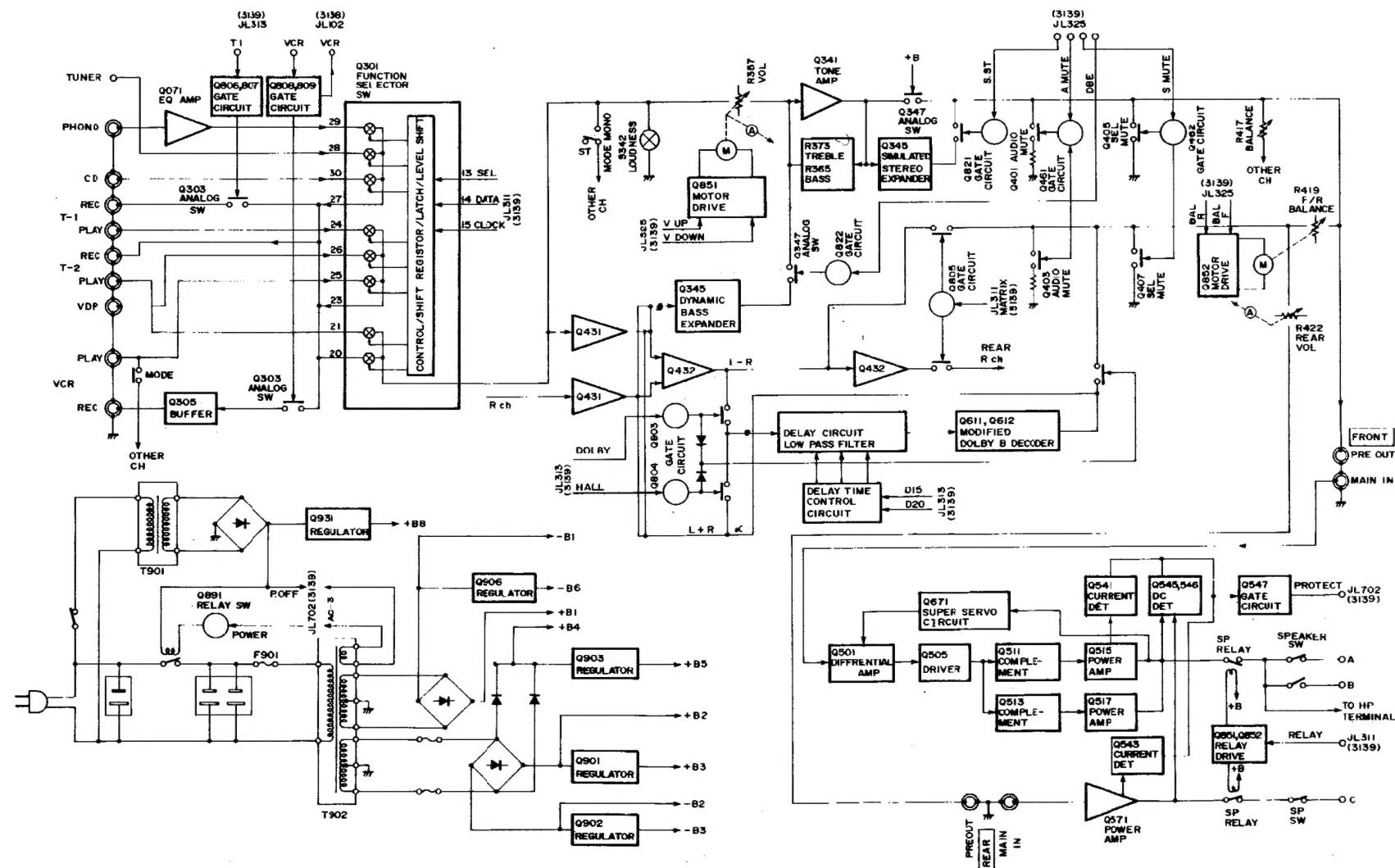
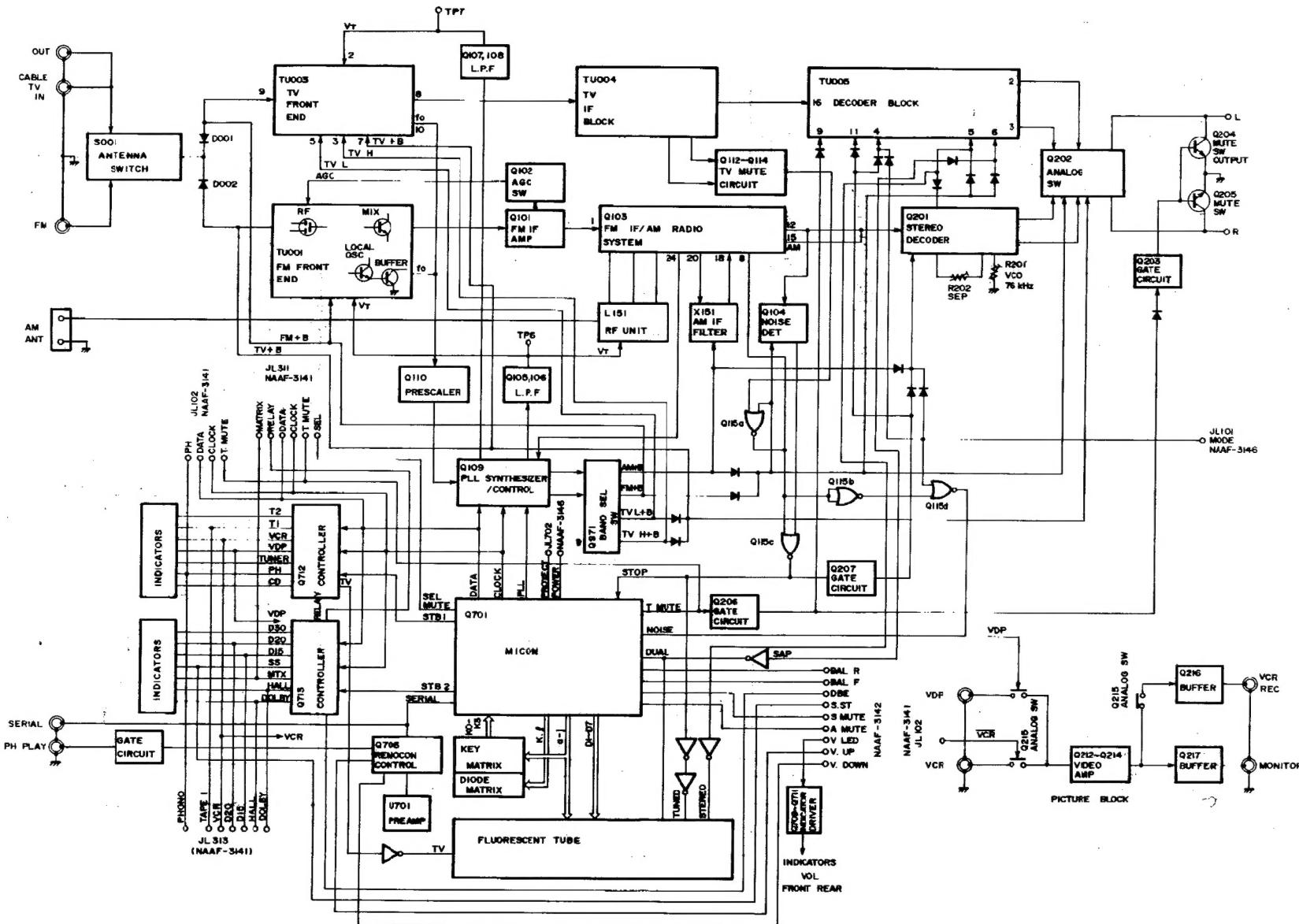


BLOCK DIAGRAM

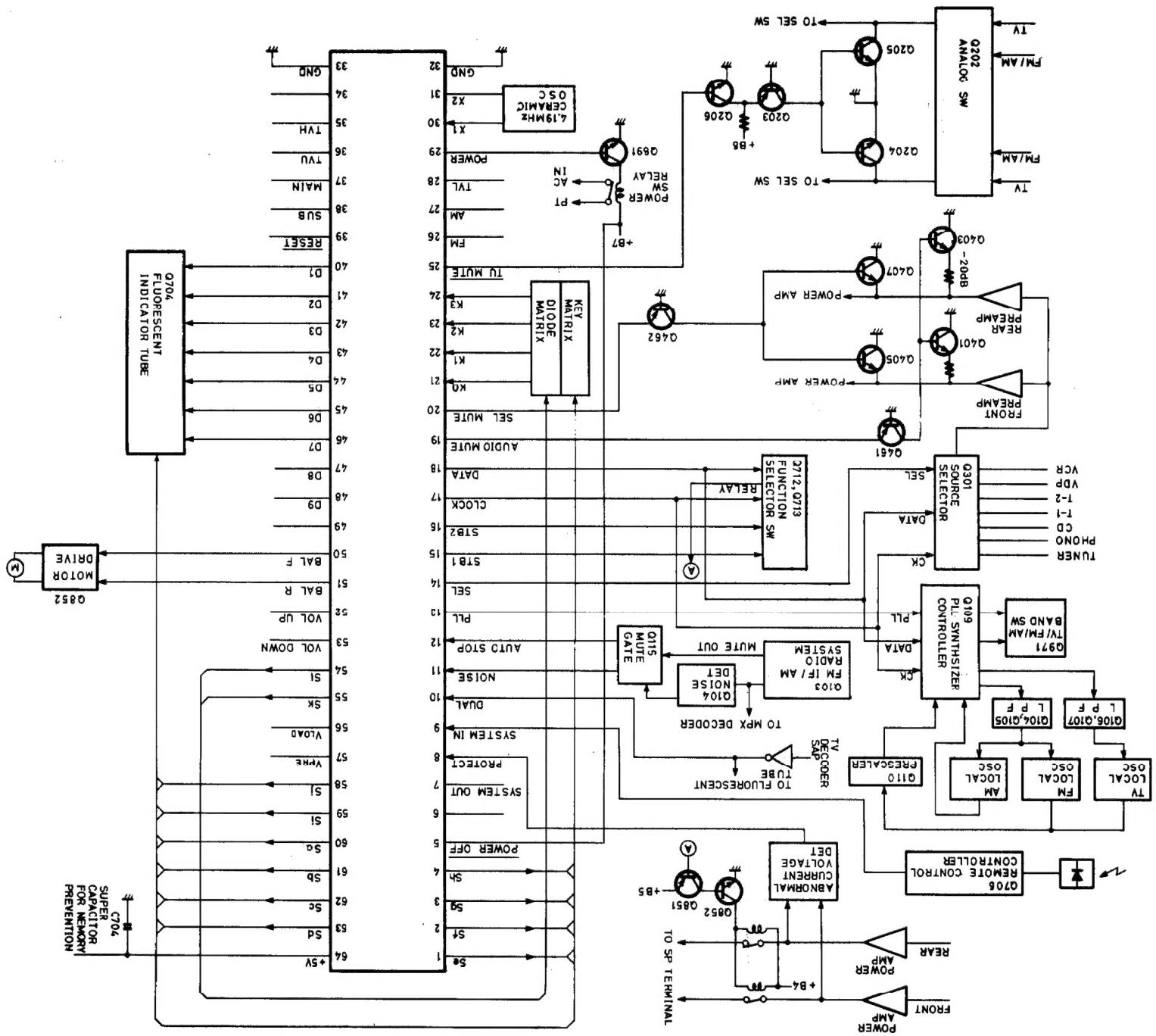
AMPLIFIER SECTION



'UNER SECTION



Pin No.	Symbol	Description
1 2 3 4	Se Sf Sg Sh	These are the output terminal for key return signal source and segment. "H" when active.
5	POWER OFF	This is the input terminal for detection of the stoppage of electric current. "L" when the stoppage of electric current.
7	SYSTEM OUT	System code output terminal. "L" when active.
8	PROTECT	This is the detection terminal for protection circuit. The speaker relay turns off when this terminal becomes the high level.
9	SYSTEM IN	System code input terminal. "H" when active.
10	DUAL (SAP)	Multichannel Television Sound detection terminal. "H" when active.
11	NOISE	This is the detection terminal for the weak broadcast. "H" when receive the weak broadcast.
12	AUTO STOP	Auto stop signal input terminal. Auto tuning stops when this terminal becomes the high level.
13	PLL	Connect to terminal CE of PLL IC (LM7001).
14	SEL	Connect to terminal SEL of Analog switch (LC7822).
15	STB1	Connect to terminal STB of Port opened IC (TC9174P).
16	STB2	Same as above.
17	CLOCK	Serial clock output terminal.
18	DATA	Serial data output terminal.
19	AUDIO MUTE	This is the output terminal for muting control of amplifier section. "H" when active.
20	SEL MUTE	This is the muting output terminal when the selector key is operated. "H" when active.
21 22 23 24	K0 K1 K2 K3	These are the input terminal for key return signal source and diode matrix. "H" when active.
25	TU MUTE	This is the output terminal for muting control of tuner section. "L" when active.
29	POWER	This is the output terminal for power source. It is "H" for power on.
30 31	X1 X2	Connect to the 4.19MHz ceramic oscillator.
32	Vss	Ground terminal.
39	RESET	Reset signal input terminal. "L" when active.
40 41 42 43 44 45 46	D1 D2 D3 D4 D5 D6 D7	These are the digit signal output terminal. "H" when active.
50	BAL. F	Front balance signal output terminal. "H" when active.
51	BAL. R	Rear balance signal output terminal. "H" when active.
54 55	S1 Sk	These are the output terminal for diode matrix. "H" when active.
56	VLOAD	Pull-down resistor connection terminal for FIP controller/Driver.
57	VPRE	Power source supply terminal for output buffer of FIP controller/Driver.
58 59 60 61 62 63	Sj Si Sa Sb Sc Sd	These are the output terminal for key return signal source and segment. "H" when active.
64	VDD	This is the device power source terminal. At the time of operation, the supply is 5V. The internal data memory (RAM) is maintained by means of the super capacitor.



FM section

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Tuned frequency	Output indicator	Adjustment	Adjust for
FM IF	1	Fig. 1	99.0 MHz 1 kHz, 75 kHz devi. 65 dBf (60 dB)	—	99.0MHz	DC voltmeter	L101	0V
	2	Fig. 1		—	99.0MHz	Distortion analyzer	L102	Minimum
Muting level	1	Connect the oscilloscope to speaker terminal A.	99.0 MHz 17.2 dBf (12 dB) 1 kHz, 75 kHz devi.	—	99.0MHz	Oscilloscope or TUNED indicator	R101	Signal output or light on
	2		99.0 MHz 16.2 dBf (11 dB) 1 kHz, 75 kHz devi.					Not output or light off
VCO		Fig. 2	99.0 MHz 1 kHz, 75 kHz devi. 65 dBf (60 dB)	—	99.0MHz	Frequency counter	R201	19kHz±10
Stereo Distortion		Fig. 3	99.0 MHz 65 dBf (60 dB) Ext. modulation	L or R ch. 1 kHz	99.0MHz	Distortion analyzer	IF on front end	Minimum
Stereo Separation	1	Fig. 3	99.0 MHz 65 dBf (60 dB) Ext. modulation	L ch. 1 kHz	99.0MHz	R ch. AC voltmeter	R202	Minimum
	2			R ch. 1 kHz		L ch. AC voltmeter		Minimum

TV section

Connection of instrument	SG output	Tuning channel	Output indicator	Adjustment	Adjust for
Fig. 4	83.25 MHz (Picture image) 70 dB	6 ch.	DC voltmeter	R162	-150±15mV
Fig. 4	83.25 MHz 36 dB	6 ch.	TUNED indicator	R171	Light on

Confirmation of fine tuning

Connection of instrument	SG output	Tuning channel	Fine tuning	Output indicator	Confirmation
Fig. 4	53.25 MHz 70 dB	2 ch.	2 ch. -2MHz	TUNED indicator	Light on
Fig. 4	85.25 MHz 70 dB	6 ch.	6 ch. +2MHz	TUNED indicator	Light on

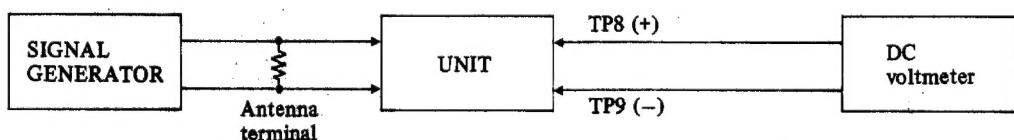


Fig. 4

01	0V	Mode switch: Mono Repeat the steps 1 and 2 until no further adjustment is necessary
01	Signal output or light on or light off	
	Mode switch: stereo	
01	Not output or light off	
01	19kHz±10Hz	Mode switch: stereo
	Minimum	
02	Minimum	Maximum and same separation
	Minimum	

r
nV

on

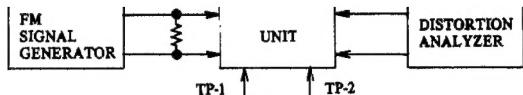


Fig. 1

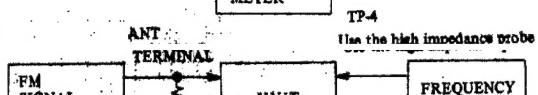


Fig. 2

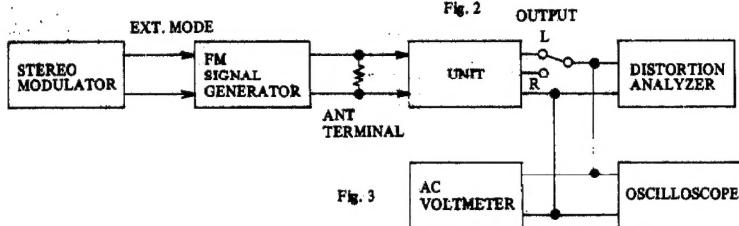


Fig. 3

Reference specifications

Tuned voltage	AM	520 kHz	1.4 ± 0.4V
		1710 kHz	8.2 ± 1.0V
FM	FM	87.50 MHz	2.0 ± 0.5V
		108.00 MHz	7.7 ± 0.5V
Muting level	FM		12 ± 3 dB
Muting width	FM		35 ± 10 kHz
Auto stop level	AM		Less than 66 dB/m
	FM		Less than 16 dB μ
Stereo indicator level			12 ± 4 dB μ

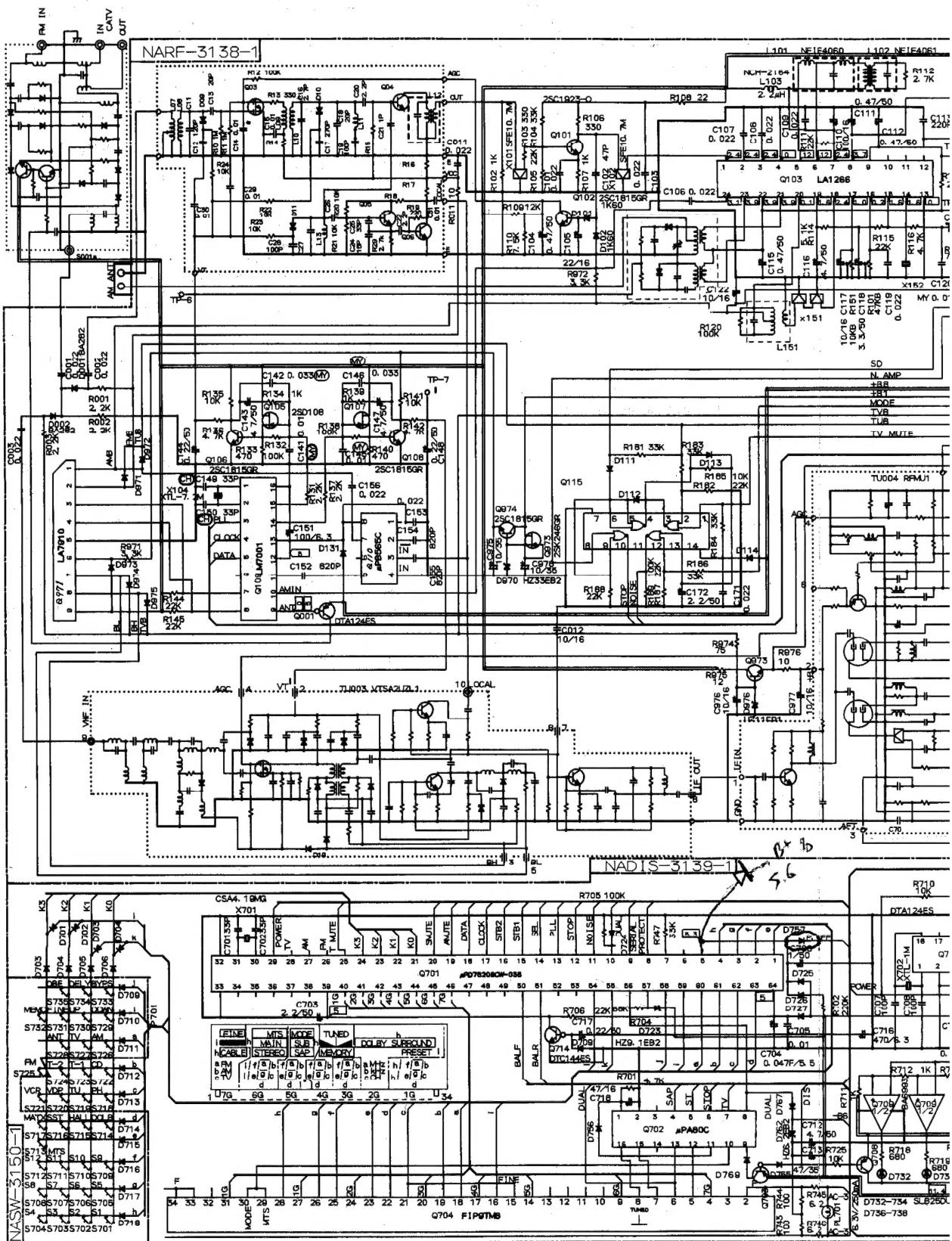
A

B

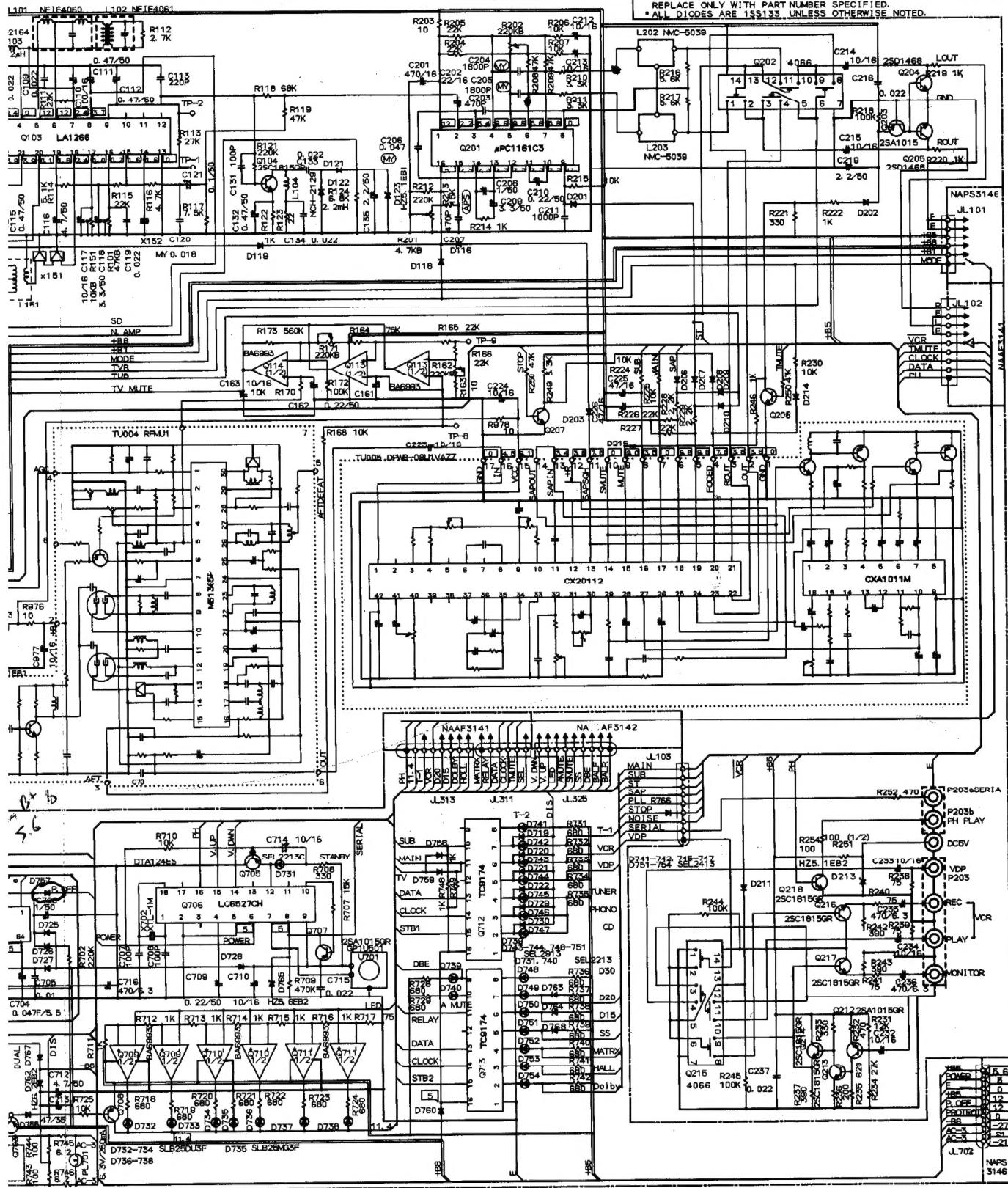
C

D

E



- ELECTROLYTIC CAPACITORS Δ ARE IN μ F.
- VOLTAGE MEASURED WITH VTVM (NO INPUT SIGNAL).
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
- THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- ALL DIODES ARE 1SS135, UNLESS OTHERWISE NOTED.



A

B

c

D

E

